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CLOSURE PLAN

Closure Plan for the Wood Fired Burn Box at Churchill Range

Naval Surface Warfare Center
Dahlgren, Virginia

July 2021

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CLOSURE PLAN FOR THE WOOD FIRED BURN BOX

NAVAL SURFACE WARFARE CENTER
DAHLGREN, VIRGINIA

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ACRONYMS

CFR	Code of Federal Regulations
CWA	Clean Water Act
DoD	U.S. Department of Defense
DOT	Department of Transportation
EEA	Explosives Experimental Area
EOD	Explosive Ordnance Disposal
EPA	U.S. Environmental Protection Agency
HCOC	Hazardous Constituents of Concern
IDW	Investigation Derived Waste
MCL	Maximum Contaminant Level
NSFDL	Naval Support Facility Dahlgren
NSWCDD	Naval Surface Warfare Center Dahlgren Division
OB	Open Burn
OD	Open Detonation
PPE	Personnel Protective Equipment
RBC	Risk Based Concentration
RCRA	Resource Conservation and Recovery Act
RDT&E	Research, Development, Test and Evaluation
RPD	Relative Percent Difference
RSL	Regional Screening Level
UXO	Unexploded Ordnance
VDEQ	Virginia Department of Environmental Quality
VHWMR	Virginia Hazardous Waste Management Regulations
VSWMR	Virginia Solid Waste Management Regulations

1.0 INTRODUCTION

This closure plan describes the activities necessary to close the wood fired burn box located on the Naval Surface Warfare Center Dahlgren Division (NSWCDD) Churchill Range in Dahlgren, Virginia.

The wood-fired burn box is constructed of 1-inch thick steel and sits on a ½-inch thick steel base. The box is square in shape, and is approximately 6-feet (ft.) wide, 6-ft. deep, and 4.5-ft. high. The burn box is equipped with both an interior and exterior cover. The interior steel cover has multiple holes to allow venting and fragment containment simultaneously. The exterior 1/4-inch thick aluminum cover is placed over the box as soon as cooling allows and remains in place until the box is cleaned out or preparing for another burn. Figures 1-1 through 1-3 contain engineering sketches of the wood fired burn box and covers.

A Resource Conservation and Recovery Act (RCRA) closure plan is needed for all Open Burn (OB)/Open Detonation (OD) units pursuing closure. RCRA closure regulations present two closure options for Subpart X units: clean closure or closure with waste in place. The premise of clean closure is that all hazardous wastes have been removed from a given RCRA regulated unit. Any releases at or from the unit will be remediated so that further regulatory control under RCRA Subtitle C is not necessary to protect human health and the environment. As part of meeting the closure performance standard for clean closure of the wood fired burn box, facility owners/operators must remove all wastes from the unit and remove or decontaminate all waste residues, contaminated containment system components, and structures and equipment contaminated with hazardous waste and hazardous waste leachate.

The RCRA closure process involves the preparation of a closure plan, the performance of closure in accordance with regulatory requirements, and certification that closure was performed in accordance with the closure plan. This closure plan, which was developed following the requirements set forth in 9 VAC 20-60-264, provides a description of how final closure of the wood fired burn box unit will be conducted in accordance with the closure performance standards. This will not involve the removal of contaminated soils from the OB area in order to demonstrate compliance with a risk-based clean closure standard. The risk-based closure standard will commence once the site is permanently closed.

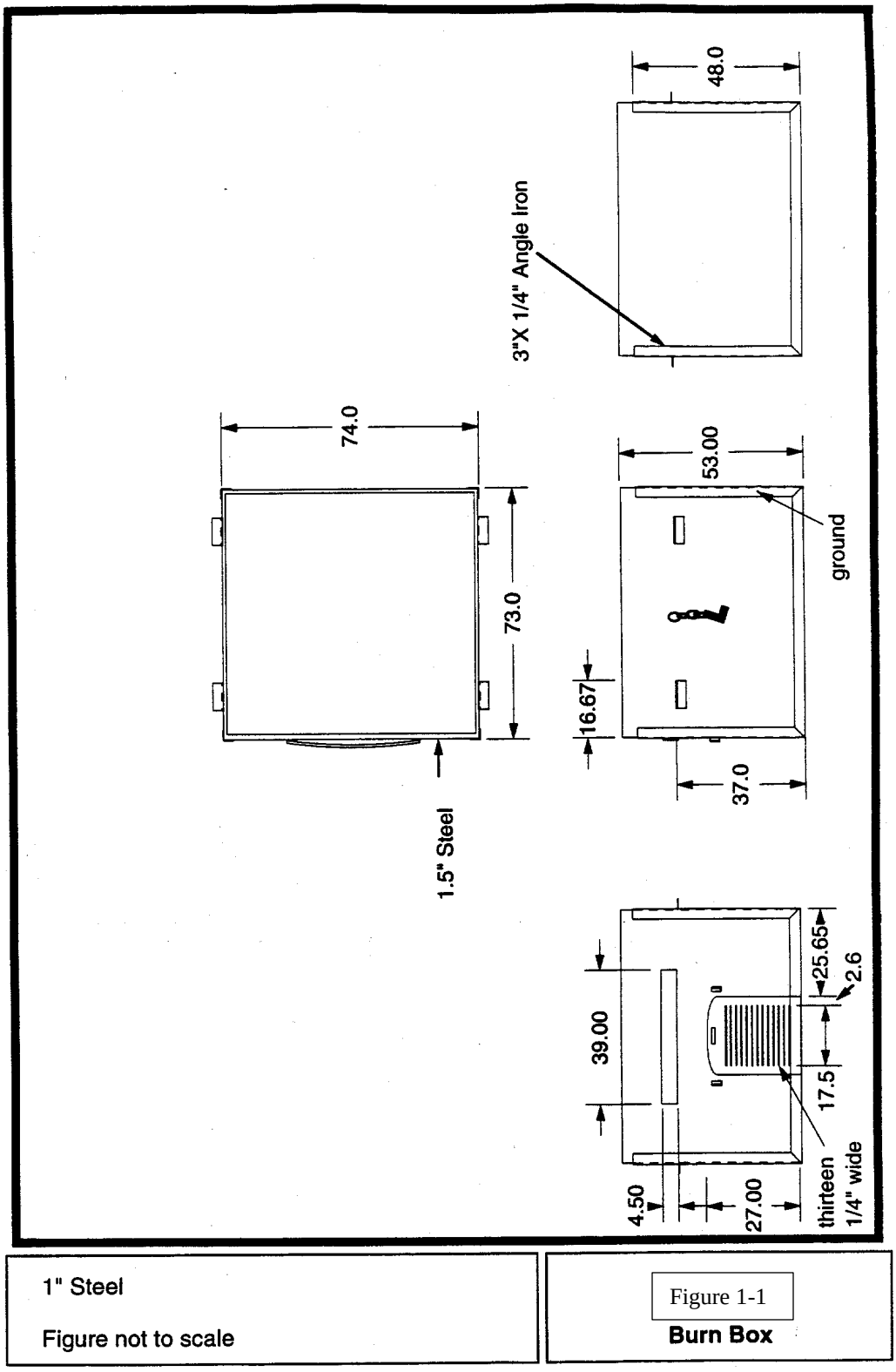

Figure 1-1. Engineering Drawing of Wood Burn Box

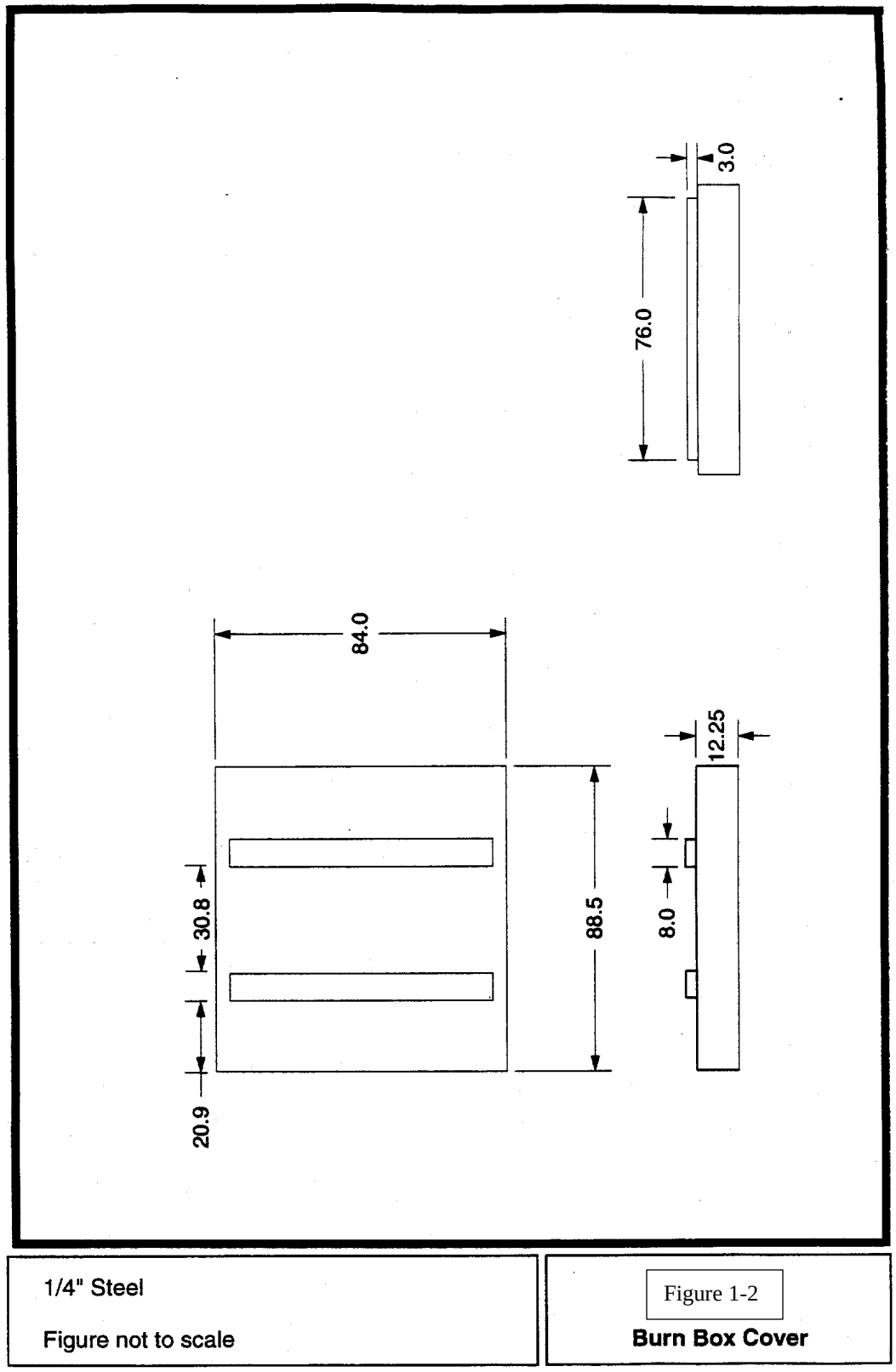

Figure 1-2. Engineering Drawing of Wood Burn Box Top Cover

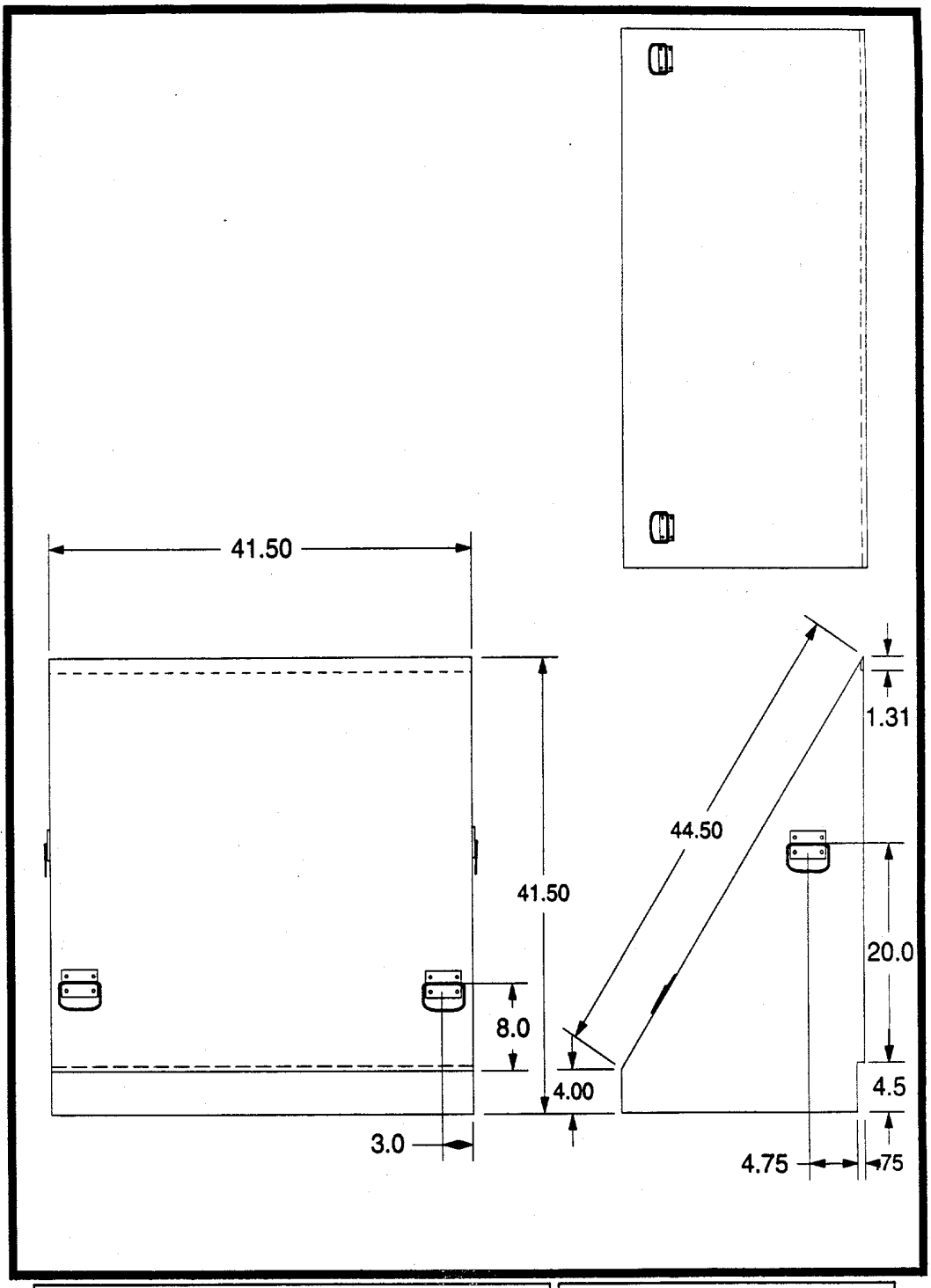

Figure 1-3. Engineering Drawing of Wood Burn Side Top Cover

2.0 FACILITY DESCRIPTION

This closure plan addresses the wood fired burn box located on the NSWCDD Churchill Range in Dahlgren, Virginia.

2.1 Facility Size and Location

NSWCDD is a tenant command located aboard the Naval Support Facility Dahlgren (NSFDL) near the Potomac River in King George County, Virginia. The facility is located approximately 28 miles east of Fredericksburg, Virginia and 53 miles south of Washington, D.C. and is bounded on the north by U.S. Highway 301 and on the east by the Potomac River. Primary access to the facility is via U.S. Highway 301, Virginia Route 206, and Virginia Route 614. Upper Machodoc Creek flows in a general west-to-east direction through the naval base, dividing it into two principal areas: Mainside, consisting of 2,673 acres, and the Explosives Experimental Area (EEA), consisting of 1,631 acres. NSWCDD has facilities on both Mainside and the EEA. NSWCDD's OB/OD operations are conducted at the EEA. A facility location map is provided in Figure 2-1. A map showing the location of the OB/OD units is provided as Figure 2-2.

As one of the Navy's principal Research, Development, Test and Evaluation (RDT&E) centers, NSWCDD generates waste ordnance and other energetic materials that have no further military use or have been stressed to a point where they are no longer safe for transport. NSWCDD also accepts unserviceable, and/or waste military munitions from other U.S. Department of Defense (DoD) facilities for treatment. In addition, NSWCDD provides emergency Explosive Ordnance Disposal (EOD) services to treat unexploded ordnance or explosive devices found in the public sector (outside the military installation of NSWCDD). NSWCDD treats these explosive hazardous wastes using OB and OD in units located on Churchill Range, a physically secured area located in the northeast quadrant of the EEA.

2.2 Facility Identification and Contact Person

Facility:	Naval Surface Warfare Center Dahlgren Division
Unit:	Wood Fired Burn Box
Owner/Operator:	Department of Navy
Facility Address:	17483 Dahlgren Road Dahlgren, VA 22448-5100
EPA ID Number:	VA7170024684

The contacts for this Closure Plan are the NSWCDD Environmental Program Manager (540) 653-0933; or the NSWCDD RCRA Permit Manager (540) 653-9283.

2.3 Waste Characteristics

The wood fired burn box treated primers, fuzes, small arms ammunition, waste explosive, and high explosives. For treatment events, consumable scrap material such as wood excelsior was placed in the bottom of the unit to form a firebed (approximately 3-ft. deep). The explosive items (maximum 40 pounds net explosive weight) burned were laid out on the consumable material. Diesel fuel and smokeless powder were added to the unit and then ignited using an electrical squib firing system. Components of military propellants were in solid form and contained no free liquids.

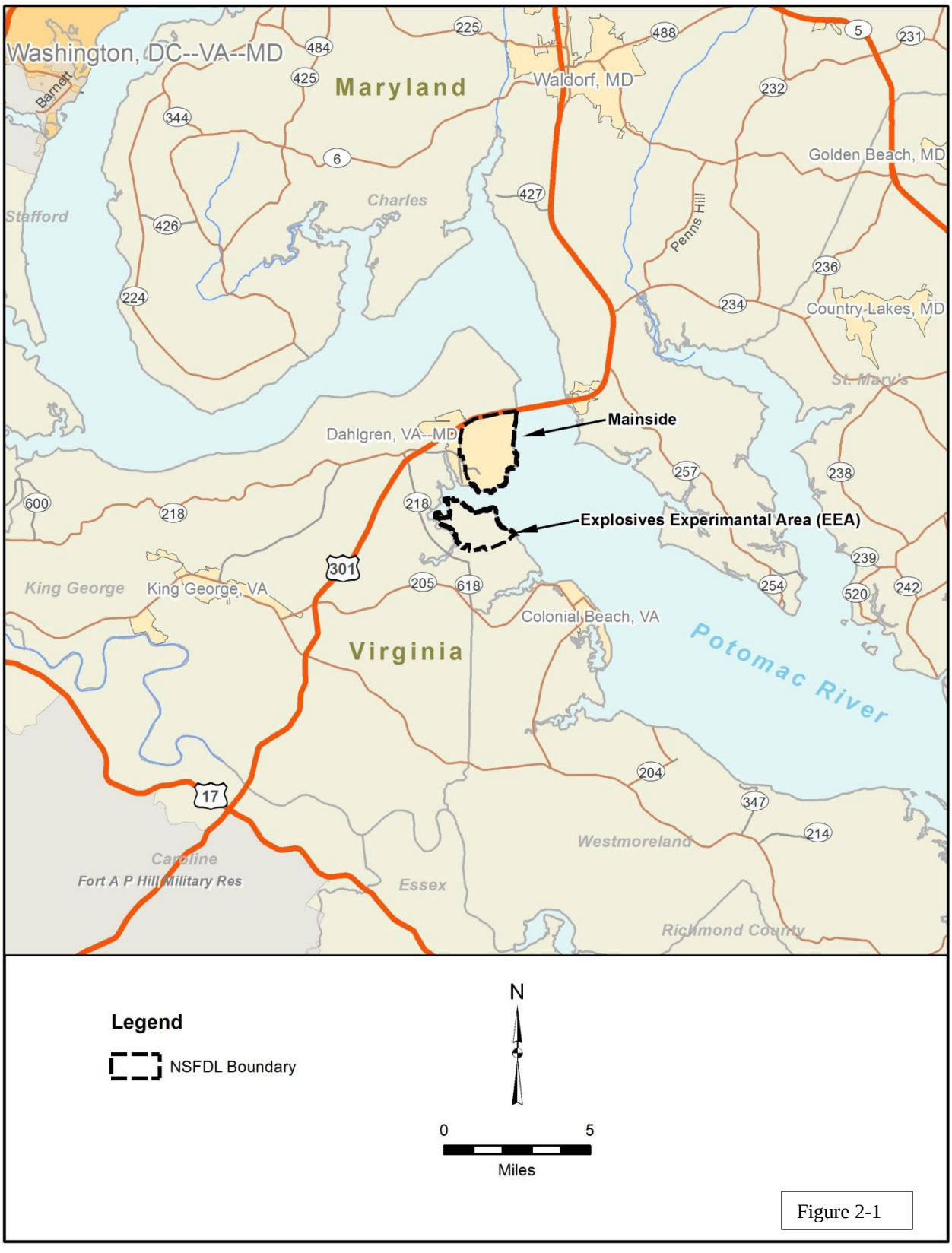

Figure 2-1. Facility Location Map of NSFDL

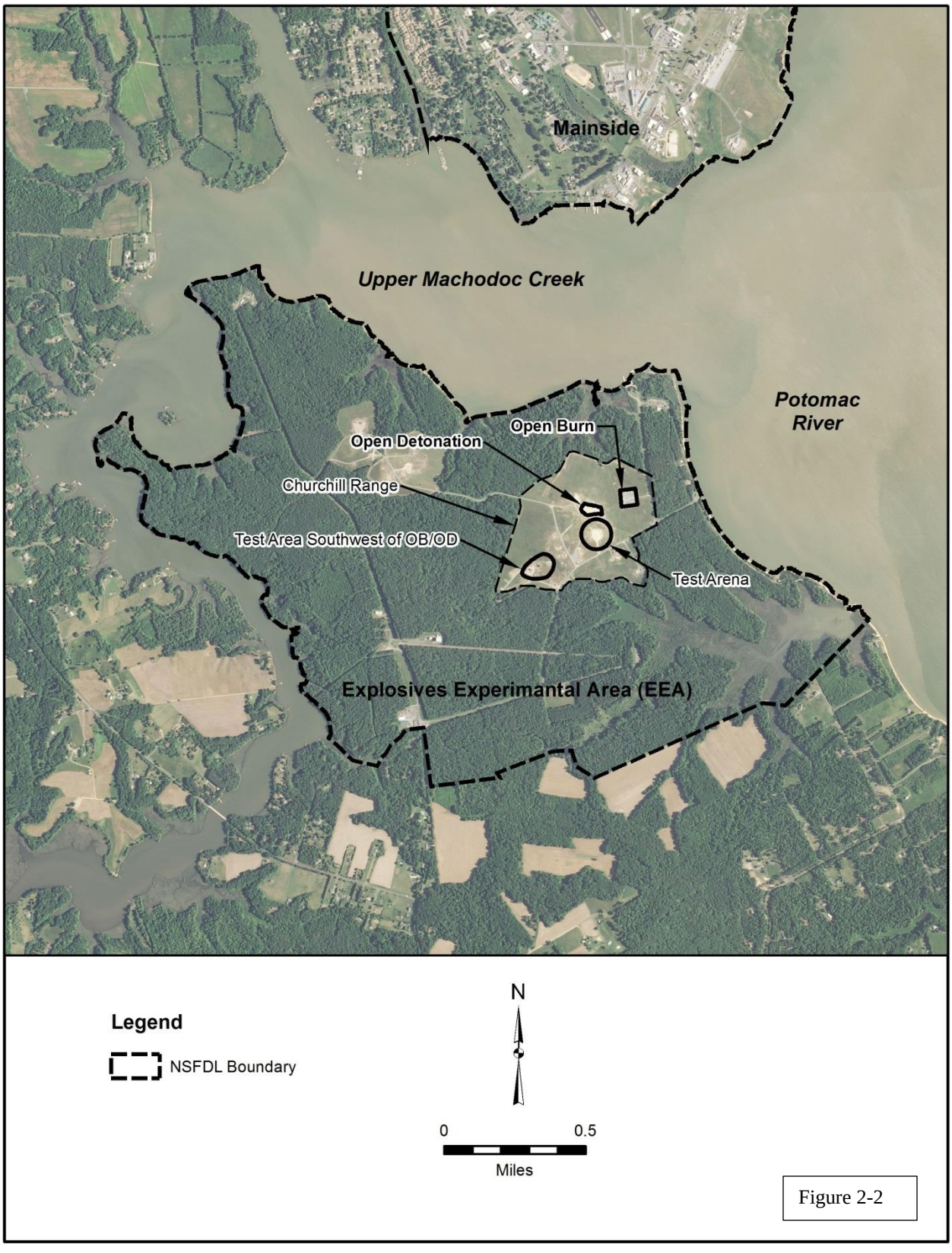

Figure 2-2. Open Burn/Open Detonation Areas

3.0 CLOSURE PERFORMANCE STANDARDS

Regulations specifying how OB and OD facilities must be closed have two parts: the general closure performance standard and the unit-specific standard for OB and OD units. The general closure performance standards require the owners/operators of hazardous waste management facilities to close the facility in a manner that:

- minimizes the need for further maintenance after closure
  controls the post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, and hazardous waste decomposition products to surface waters, groundwater, or the atmosphere; andcomplies with applicable unit-specific closure requirements.

The OB/OD-specific closure requirements (located in 40 CFR 264, Subpart X) state that the permits for miscellaneous units must include requirements that will ensure protection of human health and the environment appropriate for the OB/OD units.

4.0 CLOSURE OF THE WOOD FIRED BURN BOX

Closure of the wood fired burn box must fulfill the regulatory requirements of 40 CFR 264, Subpart G, in accordance with the closure performance standard, as discussed above.

4.1 Closure in Accordance with the Closure Performance Standard

When a facility operator is no longer going to use a hazardous waste management unit for waste management, specific activities must occur to ensure the unit is decontaminated in a manner that protects human health and the environment. These specific activities are referred to as "closure." In order for the unit to be considered clean closed, contaminants must not exist in concentrations that pose a risk to human health or the environment. Contaminants will be screened against the EPA's Maximum Contaminant Level (MCL) or Risk Based Concentration (RBC) for tapwater found in the most recent EPA Regional Screening Levels (RSL) table.

4.2 Maximum Extent of Operations and Maximum Waste Inventory

The wood fired burn box was permitted in October 2005 which allowed a maximum of 40 pounds of net explosive weight per treatment event. Operations at the unit ceased in 2009 once the propane burn unit came online. Since that time, the wood fired burn box was considered a backup in the event the propane unit went off line.

Following the final treatment event at the wood fired burn box, all wastes were removed. Therefore, the maximum waste inventory is zero.

Closure activities and any corrective action that may be required shall be limited to the wood fired burn box.

5.0 WASTE MANAGEMENT FROM CLOSURE ACTIVITIES

The waste management procedures to be used for closure of the wood fired burn box are discussed below.

5.1 Waste Management Methods

Wastes likely to be generated during the closure activities include steel from the removal of the wood fired burn box equipment; decontamination liquid; brushes used to decontaminate; personal protective equipment (PPE); and scrap metal. The volume of liquid waste generated during the cleaning of the wood fired burn box will be minimized by only using the amount of wash water and rinse water necessary to achieve successful decontamination. Solvents will not be used. This approach will help minimize further contamination of the liquids generated.

5.1.1 UXO

Any unexploded ordnance (UXO) discovered during closure will be treated in accordance with EOD publications. As all wastes were removed from the unit following its last use and the unit has been covered since that time, no UXO is anticipated to be encountered.

5.1.2 Investigation-Derived Waste (IDW)

Materials that may become IDW are PPE (disposable coveralls, gloves, booties, etc.), disposable equipment (plastic ground and equipment covers, aluminum foil, teflon tubing, broken or unused sample containers, sample container boxes, tape, etc.), cleaning fluids, wash water, and packing and shipping materials. However, just because these wastes come from a unit undergoing closure does not automatically render them as hazardous wastes under RCRA. Therefore, it must be determined whether the waste itself meets the RCRA definition of a hazardous waste, and if so, the RCRA standards for storing, treatment, and disposal will be applicable to the management of these wastes.

5.1.2.1 Characterizing IDW

The most important characterization decision is whether IDW contains “hazardous waste” under RCRA. IDW generated during closure may either exhibit a RCRA characteristic or contain RCRA listed waste. In order to properly characterize the IDW, sampling of the IDW will take place to determine if the IDW is hazardous unless permittee will handle the IDW as hazardous.

5.1.2.2 Management of Non-Hazardous IDW

Nonhazardous PPE, disposable equipment, and paper and cardboard wastes will be bagged and placed into the on-site garbage receptacle for off-site disposal. Nonhazardous decontamination liquids will be containerized and disposed of in accordance with local requirements or regulations.

5.1.2.3 Management of Hazardous IDW

Hazardous IDW will be containerized and disposed of off-site at a permitted facility that can demonstrate compliance with all RCRA Subtitle C design, operation, and closure requirements and meet the Land Ban Restrictions.

5.1.3 Waste Management

Wastes associated with closure activities will be managed as follows:

- Wastes will be stored in appropriate containers that are compatible with the wastes and are in good condition.
- If analytical results or generator/process knowledge indicate that the waste is hazardous or will be classified as hazardous, NSWCDD will manage the waste in accordance with all applicable regulations in 40 CFR §261-268.
- Waste containers will remain under the control of the personnel generating the waste.
- Waste containers will be segregated according to the compatibility and chemical waste type.
- Waste will be stored in containers that remain closed, except when adding or removing wastes.
- Waste containers bearing free liquid will be provided with secondary containment of sufficient volume to prevent spilled liquids from being released onto the ground.
- Waste containers will be managed in such a manner as to prevent ruptures and leaks.
- Waste containers will be labeled appropriately, pending receipt of analytical results. Labels will be filled out appropriately and marked using permanent marker or pen. Label information will include waste source, suspected contaminants, contents, the date which accumulation began, and a contact name.

5.1.4 Waste Disposal

All wastes from closure activities determined to be hazardous will be managed in accordance with the Hazardous Waste Management Regulations from the time of generation. Hazardous

wastes will be shipped off-site for treatment and disposal at a permitted RCRA facility. Wastes characterized as nonhazardous (e.g., decontamination liquids) will be evaluated to determine the appropriate disposal method in accordance with applicable law.

6.0 CLOSURE PROCESS

The closure of the wood fired burn box will not involve the evaluation of the existing site conditions, as the unit is collocated with other OB units. This will occur during final closure events of the remaining OB/OD units.

No waste piles will be created during closure activities. Waste debris and residues will be stored in 55-gallon drums.

The Northern Regional Office of VDEQ will be notified of the temporary (less-than-90-day) storage, if required, of hazardous waste and other wastes associated with closure of the wood fired burn box.

The Central Office and Northern Regional Office will be notified a minimum 45 days prior to commencement of closure activities.

In accordance with the EPA's Contained-in Policy, contaminated environmental debris or media is subject to regulation under RCRA if they contain hazardous waste. Contaminated residues and environmental media contain hazardous waste when the following occurs:

- When the residues or media (e.g., soil, aggregate, wastewaters, etc.) exhibit a characteristic of hazardous waste in accordance with 40 CFR Part 261, Subpart C, Characteristics of Hazardous Waste, § 261.20.
- When a residue, waste, or wastewater removed from a regulated unit, which manages a listed waste under 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes, contains a hazardous constituent from Part 261 Appendix VI or VIII.
- When the media are contaminated with concentrations of hazardous waste constituents that are above health or risk-based levels.

Any equipment contaminated with hazardous waste and any leachate from the wood fired burn box are required to be managed as a hazardous waste only if the concentration of Hazardous Waste Constituents of Concern (HCOC) exceeds the risk level in accordance with the Virginia Hazardous Waste Management Regulations (VHWMR) and RCRA. That is, materials, wastewaters, or equipment contaminated with hazardous waste constituents are required to be disposed in a permitted hazardous waste landfill, unless demonstrated by testing that they are

nonhazardous in accordance with specified decontamination standards of the approved closure plan and the VHWMR and RCRA regulations.

The demonstration by testing includes the analyses for all HCOCs specified in the approved closure plan.

All materials, wastewaters, or leachate or other wastes generated during closure that are demonstrated to be hazardous must be treated or disposed so to comply with 40 CFR Part 268, Land Disposal Restrictions, Subpart D, Treatment Standards, § 268.40, Applicability of Treatment Standards.

All waste materials generated in the closure process that are demonstrated as non-hazardous are required to be disposed of as a solid waste in accordance with the VHWMR. Disposal of all nonhazardous wastes will require documentation of disposal from the authority regulated under the Virginia Solid Waste Management Regulations.

Wastewaters generated in the closure process that are demonstrated as nonhazardous will be treated as nonregulated waste and turned into the installation hazardous waste facility for disposal.

6.1 Wood Fired Burn Box Closure

The equipment included in this closure process will be one (1) steel wood-fired burn box which includes one (1) steel grated cover. The unit also has associated aluminum lids/covers which prevent interior exposure to the elements. These lids/covers are installed after the treatment event has concluded and are not exposed to any HCOCs.

After successful decontamination, the unit can either be disposed of as nonhazardous solid waste, recycled as scrap material, or be put to other use at NSWCDD. Decontamination procedures for the wood fired burn unit are summarized below. Samples collected will be analyzed as appropriate for analytes listed in Table 6-1.

- **Step 1**: All hazardous waste will be managed in accordance with the VHWMR and RCRA.
- **Step 2**: Mobilize and remove waste and unit components remaining within the unit, if any.
- **Step 3:** Establish equipment decontamination area as described in Section 6.8.

- **Step 4**: Commence mechanical cleaning and high/low pressure washes. Mechanical cleaning will involve the removal of visual residue inside the unit via a combination of scraping, sweeping, or other appropriate methods. This will be followed by a high pressure wash. The high pressure washing may include steam or detergent for more effective cleaning. Two successive low pressure ambient temperature water rinses will then follow this high pressure wash. Wash water and residues will be removed by pumping, bailing, shoveling, etc. from the bottom of the unit and collected and disposed of in accordance with the VHWMR.
- **Step 5**: A third, final low pressure ambient temperature water rinse will occur. This rinse will then be collected and analyzed to verify the unit's status as either hazardous or non-hazardous waste.
- **Step 6**: If the rinsate samples indicate that contamination is still present at or above regulated levels, NSWCDD will repeat the decontamination procedures or dispose of the unit offsite as hazardous waste. If the rinsate samples indicate no contamination is present above regulatory levels, the equipment will be removed from the site and repurposed, recycled or disposed offsite as non-hazardous waste. To determine if contamination is present at or above regulated levels, the samples will be screened against the MCL or RBC for tapwater found in the most recent EPA RSL table.
- **Step 7**: Upon achieving clean closure in accordance with VAC 20-60-264, a certified closure report will be prepared and submitted to VDEQ for review.

6.2 Hazardous Constituents of Concern

Table 6-1 is a list of HCOCs that were developed based on the types of waste treated at the wood fired burn box. This table presents the analyte list that will be used during closure. Samples collected in conjunction with closure activities (except waste characterization samples) will be analyzed for the constituents presented, as appropriate, using the specified EPA SW-846 method or other appropriate test method.

6.3 Sampling Protocols

All samples collected during closure activities (water, and waste) will be collected in compliance with SW-846 Test Methods for Evaluating Solid Waste Field Manual or with currently accepted industrial standards to ensure, at a minimum, the following concerns are

addressed: cross-contamination, collection of representative samples, and data quality assurance/quality control (QA/QC) procedures discussed below. Sampling personnel will wear a new pair of gloves for each sample collected.

1. All samples will be properly labeled at the time of sampling.
2. Following the collection of the samples, the sample containers will be placed in a cooler with ice and maintained at approximately 4 degrees Celsius until received by the laboratory.
3. Strict chain of custody records will be maintained and included in the final closure report and an appendix.

Water samples will be collected using a method which minimizes the potential for cross-contamination. Wash water from the wood fired burn box will be collected and contained. A dedicated pump and hose or disposable bailer will be used to remove water from the container, and for collecting rinse water samples. All materials employed for water sample collection will be thoroughly decontaminated prior to collection of each sample.

6.4 Sample Handling

All samples will be labeled to prevent misidentification in the field and at the laboratory. Sample labels will include at least the following information:

Site Name	Preservative
Sample Number	Type of Sample (Grab or Composite)
Name of Collector	Sample matrix
Date and Time of Collection	Analytical Method

Labels will be affixed to the sample containers prior to or at the time of collection, and will be filled out in indelible ink at the time of collection. The shipping container will be sealed with custody tape. The chain-of-custody record for each given sample is to be completed before sampling is initiated by the same sampling team at other locations.

The sample will be placed in coolers and preserved according to EPA protocol while enroute to the laboratory for analysis. Chain-of-custody forms will be used to document the transfer of samples from the collector to the transporter to the analytical laboratory. All information and documentation pertinent to field sampling will be recorded in a field file or logbook.

6.5 Quality Assurance/Quality Control

In addition to strict adherence to this Closure Plan, field sampling QA/QC procedures will include the collection of trip blanks and field duplicates. Trip blanks will accompany sample

containers to and from the field. These QC samples will be used to detect any contamination or cross-contamination during handling and transportation. Field duplicate samples will be collected at a rate of 10% of the overall number of samples taken. Documentation of the QA/QC procedures and results will be conducted in accordance with EPA SW-846, Chapter 1, and submitted to VDEQ along with the closure certification.

6.6 Data Quality Objectives

6.6.1 Responsibility for Quality

Responsibility for compliance with data quality objectives falls on NSWCDD to ensure that protocols for work are followed.

6.6.2 Data Requirements

The data generated during closure activities will be used for determination of the need for further investigation, remedial alternatives, and/or closure.

6.6.3 Analytical Requirement Selection

Analytical requirements were selected based on the types of waste materials treated at the unit. The methods to be used are listed in Table 6-1.

6.6.4 Detection Limits

NSWCDD will use a laboratory certified under the Virginia Environmental Laboratory Accreditation Program who will be contracted to provide analysis of the samples. The lab will strive to achieve detection limits at or below the EPA Region III Risk Based Concentrations (RBC) for Residential Exposure Scenarios for each constituent. Where Practical Quantitation Limits below residential RBCs cannot be achieved using the best available laboratory technology, results will be evaluated in the context of other analytical data and site conditions.

Analysis of split samples should not have a Relative Percent Difference (RPD) of greater than 100%. Repeat analysis of the same sample should have an RPD of less than 20%.

6.6.5 Level of Quality Assurance Effort

Standard analytical methods will be used and an independent data quality assessment will be performed.

6.7 Mobilization and Set-Up

Before beginning any closure activities for the wood fired burn box, the remediation contractor will make all necessary preliminary preparations. These preparations will include, at a minimum, the following:

- defining and posting boundaries of the controlled remediation work area to prevent unauthorized entry; and
- establishing decontamination and waste staging areas/locations.

No closure activities will be initiated until all preliminary preparations are complete.

6.8 Equipment Decontamination

All non-disposable sampling equipment and hand tools used during closure will be decontaminated in a nearby temporary staging area as required. All equipment will be washed in containers or in small decontamination areas. All equipment decontamination areas will be constructed of sufficient materials and thickness, and contain sufficient number of layers to create an impervious surface which allows for the collection of all wash water, rinseate and residues in containers or tanks (e.g. a decontamination area constructed of double layer of 8-millimeter polyethylene sheeting wrapped over a 4x4 wood frame). The temporary staging area will be easily constructed and dismantled and only required for short periods of time.

The steel wood-fired burn unit will be lifted and placed in a 12-ft. long x 12-ft. wide x 1-ft. high steel containment pan for decontamination to mitigate any risk of spill or leaks onto the ground. The unit is enclosed and impermeable except for the openings at the top and on the side which are covered when not in use. The top and side covers will be removed for decontamination procedures. All wash water will be contained at the bottom of the unit or within the surrounding steel containment pan. Wash water and residues will be removed through the side opening of the unit or steel containment pan by pumping, bailing, shoveling, etc., to appropriate containers for storage, sampling and testing, and disposal in accordance with 40 CFR Part 261 and 40 CFR Part 268. The top and side covers of the unit will be reinstalled after proceeding with decontamination procedures to eliminate contact of precipitation. Figure 6-1 depicts the top and side covers of the wood fired burn unit. Figure 6-2 depicts the 12-ft. long x 12-ft. wide x 1-ft. high steel containment pan.

The steel grated cover will be stood on end and placed on the steel containment pan for decontamination. The steel containment pan has 1-ft. high edging to prevent runoff and will contain all wash water. Wash water and residues will be removed from the steel containment pan by pumping, bailing, shoveling, etc., to appropriate containers for storage, sampling and testing, and disposal in accordance with 40 CFR Part 261 and 40 CFR Part 268. A tarp will be placed over the steel grated cover following decontamination procedures to eliminate contact of precipitation.

6.9 Follow-up Activities

A bound, weatherproof site logbook will be maintained throughout the closure process. This book will contain a summary of each day's activities and will reference the field notebook when applicable. All information related to sampling or field activities, including sampling time, weather conditions, unusual events, field measurements, etc., will be recorded in the field notebook.

Figure 6-1. Burn Box Covers

Figure 6-2. Steel Containment Pan

Table 6-1. Analysis and Analytical Methods

Constituents	Analytical Method (SW-846)
Energetics	
1,3,5-trinitrobenzene	8330
1,3-dinitrobenzene	8330
2,4,6-trinitrotoluene	8330
2,4-dinitrotoluene	8330
2,6-dinitrotoluene	8330
2-amino-4,6-dinitrotoluene	8330
2-nitrotoluene	8330
3-nitrotoluene	8330
4-amino-2,6-dinitrotoluene	8330
4-nitrotoluene	8330
Ethylene glycol dinitrate	8330
HMX	8330
Nitrobenzene	8330
Nitroglycerin	8330
PETN	8330
RDX	8330
Tetryl	8330
Total Metals	
Arsenic	6010/6020
Barium	6010/6020
Cadmium	6010/6020
Chromium	6010/6020
Lead	6010/6020
Mercury	7470A
Selenium	6010/6020
Silver	6010/6020
VOCs	
Benzene	8260
Carbon Tetrachloride	8260
Chlorobenzene	8260
Chloroform	8260
1,4- Dichlorobenzene	8260
1,2- Dichloroethane	8260
1,1- Dichloroethane	8260
Hexachlorobutadiene	8260
Hexachloroethane	8260
Methyl Ethyl Ketone	8260
Tetrachloroethylene	8260
Trichloroethylene	8260

SVOCs	8260
o-Cresol	8270
m-Cresol	8270
p-Cresol	8270
2,4- Dinitrotoluene	8270
Endrin	8270
Heptachlor	8270
Hexachlorobenzene	8270
Hexachlorobutadiene	8270
Hexachloroethane	8270
Lindane	8720
Methoxychlor	8270
Pentachlorophenol	8270
Pyridine	8270
Toxaphene	8270
2,4,5- Trichlorophenol	8270
2,4,6- Trichlorophenol	8270
Pesticides	
Chlordane	8081
Miscellaneous	
Perchlorate	6850

7.0 SCHEDULE FOR CLOSURE AND CERTIFICATION

Significant closure milestones include the notification of closure, time allowed for closure activities, and certification of closure.

7.1 Timetable for Closure Activities

A schedule of the closure activities is presented in Table 7-1.

Table 7-1. Timetable of Closure Activities

Closure Activity	Cumulative Time (Days) from VDEQ Approval of Closure Plan
Notify VDEQ at Least 45 Days Prior to Commencement of Closure Activities	Prior to Closure
Secure Subcontract for Burn Box Unit Decontamination	Prior to Closure
Prepare Containment Pan	0 to 15
Place Burn Box Unit Inside Containment Pan	15 to 30
Decontamination and Rinse Sampling of Burn Box Unit	30 to 60
Receive Sampling Analytical Results, Evaluate Results and Discuss with VDEQ	60 to 120
Prepare Closure Certification Report	120 to 180
Submit Closure Certification Report	180 to 240

7.2 Total Time Required to Close the Unit

The closure activities of the wood fired burn box is expected to be completed within 180 days of the start date. The closure certification report will be submitted to VDEQ within 60 days of the completion of the closure activities. Should an extension become necessary, the closure extension will be submitted in accordance with 40 CFR 264.113.

7.3 Extension of Closure Time

An extension of the closure period is not anticipated; therefore, a request to extend the closure time is not included in this closure plan.

7.4 Closure Certification

Within 60 days following completion of closure of the wood fired burn box, NSWCDD will submit to VDEQ a closure report that includes certification that the unit has been closed in accordance with the approved closure plan. The certification will be signed by the NSWCDD Commander or his designee and by an independent professional engineer who is registered in Virginia.

8.0 CONTINGENT CLOSURE PLAN

The goal of this closure plan is to demonstrate clean closure of the wood fired burn box. However, in the event that it is determined that achieving clean closure standards is not feasible, a contingent closure plan will be submitted for review and approval by VDEQ.

8.1 Contingent Closure Activities

The contingent closure plan will only be implemented after it has been determined that achieving clean closure of the wood fired burn box is not feasible. Therefore, the closure activities described in Section 8.0 will still be performed (i.e., removal of wastes, wood fired burn box, etc.).

8.2 Contingent Closure Schedule

The closure schedule for contingent closure is the same as described in Section 9.0.

8.3 Post-Closure Care

Post closure care will not be required upon successful clean closure of the wood fired burn box.

8.4 Certification of Closure

Within 60 days of closure of the wood fired burn box, NSWCDD will provide VDEQ a certification by a qualified professional engineer with registration in the state of Virginia that the unit has been closed in accordance with the contingent closure plan. The certification will be signed by the independent engineer as well as the NSWCDD Commander or his designee.

9.0 CLOSURE COST ESTIMATE

Federal facilities are exempt from the closure and post-closure financial requirements pursuant to 9 VAC 20-60-264 and 40 CFR 264.140.

If the facility's permit is terminated, or if the facility's permit is otherwise ordered, by judicial decree or Order of the Board, to cease receiving hazardous waste, the treatment areas will be closed in accordance with the deadlines established in 9 VAC 20-60-264, 40 CFR 264.113, and Table 7.1.

10.0 FINANCIAL ASSURANCE MECHANISM

In accordance with 40 CFR 264.140, “Subpart H - Financial Requirements: Applicability”, federal facilities are exempt from the requirements for financial assurance for closure and post-closure,therefore, this section is not applicable.